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## Chile

## Tree Nuts

## Annual

## 2006

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**Report Highlights:**

Walnut production and exports are expected to increase this year, but almonds were severely affected by adverse weather conditions and production and exports will fall significantly.

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Includes PSD Changes: Yes  
Includes Trade Matrix: Yes  
Unscheduled Report  
Santiago [CI1]  
[CI]

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## Executive Summary

Chile's walnut production and exports in MY2006/07 (Jan-Dec, 2006) are expected to be larger than the previous year as adverse weather conditions affected only small production areas during last spring (Sep-Nov 2005). Walnut production will continue to expand in the coming years as a result of improved technologies, replacement of uprooted orchards with improved varieties and overall increases in planted area. As a result of frost and rain during last winter (July-August 2005) that affected most almond growing areas production is expected to fall significantly in MY2006.

## Walnuts

### Production

Production for MY2005/2006 did not expand as previously estimated as large planted areas were harder hit than previously expected by frost during the winter of CY2004. Although some areas in Regions V and VI were again affected by cold weather and frost during the flowering period, industry sources expect production to expand anyway in MY2006/2007 as additional areas planted are coming into production. Additionally, many producers have been adopting improved technologies like pruning and drip irrigation, which will keep expanding total production further in the coming years as yields increase. Producers also are expected to continue to replace aging orchards with improved varieties, increase grafting of their lowest-yielding trees, and expand planted areas. Thus, the long-term forecast is that production will continue to expand. This forecast assumes normal weather conditions throughout the season.

### Crop Area

Although walnuts are planted from the Third Region (Copiapo) down to the Ninth Region (Temuco), over 90 percent of this crop is planted in the central areas, specifically Region Five (San Felipe-Los Andes), the Metropolitan Region (Santiago) and Region Six (Rancagua). The two main factors for the overall increase in planted area are a continuous deterioration in the profitability of alternative fruit crops and the relatively good prices obtained by walnut producers.

| <b>Table: CHILE – Walnut Planted Area and Production</b> |                   |                 |              |
|--|-------------------|-----------------|--------------|
| Years  | Planted Area (Ha) | Production (MT) | Exports (MT) |
| 1995   | 6,980             | 9,800           | 8,665        |
| 1996   | 7,000             | 8,800           | 8,277        |
| 1997   | 7,480             | 10,950          | 8,880        |
| 1998   | 7,250             | 9,955           | 8,114        |
| 1999   | 7,015             | 12,000          | 8,503        |
| 2000   | 7,165             | 10,000          | 6,582        |
| 2001   | 7,200             | 11,800          | 9,551        |
| 2002   | 7,250             | 12,400          | 8,890        |
| 2003   | 7,808             | 13,800          | 12,187       |
| 2004   | 7,856             | 12,500          | 10,791       |
| 2005 1/  | 8,255             | 13,900          | 12,781       |
| 2006 2/  | 8,500             | 14,500          | 13,000       |
| 2008 3/  | 9,500             | 16,000          | 14,300       |
| 1/ Estimated   |                   |                 |              |
| 2/ Forecasted  |                   |                 |              |
| 3/ Projected   |                   |                 |              |

## Inputs

All commercial walnut orchards are planted on irrigated land. However, only an estimated 60 percent of the planted area has modern irrigation systems. As a result, when there is not enough water supplied from wells, rivers and streams flowing from the Andes Mountains, water availability becomes an important factor limiting production, mainly in Regions V and VI, where output can be affected significantly. The average orchard size is 10 to 15 hectares, which is double the size of orchards in France and half the size of orchards in the US.

Although a large percentage of walnut trees in production in Chile originate from seeds, budding and grafting of new and improved varieties like Serr and Chandler has increased in recent years. Industry sources indicated that there are still an estimated 30 percent of the total planted area that originated from seeds.

Increasing labor costs are an important factor affecting walnut production and processing. Chile has a competitive quality advantage in shelled walnuts, since almost all shelled walnuts are hand-cracked. Although the premium Chile obtains from this quality advantage has thus far continued to encourage hand-shelling; increased labor costs may mean that Chile could lose this advantage in coming years. Additionally, similar to fruits, returns to Chile's walnut industry during the last season have been falling. In general, prices for exported walnuts have not varied much in dollar terms, but during the last two years the Chilean peso has gone through a significant revaluation process. The exchange rate for the peso has fallen from 740 Chilean pesos to only 520 pesos to the dollar today. Another factor is the increase in transportation costs (ocean freight); which have increased close to 30 percent, depending on the market. Also labor costs have been increasing in peso terms. A new law was approved reducing the weekly workweek from 48 hours to 45-hours. This is an important factor for the labor-intensive walnut industry in Chile. In the case of walnut production, labor represents 70 % of total costs. As reported by some producers, production costs for walnuts are estimated to be between US\$2,300 and US\$2,500 per hectare, in Chile.

## Consumption

As with most other Chilean fruits, domestic walnut consumption is a residual of the export market. If international prices are low, exports fall off and domestic consumption increases as the larger supply drives domestic prices down. However, domestic demand does not drive consumption or determine market prices.

## Trade

As a result of a deterioration of Chile's main Latin American markets for walnuts and an increased marketing effort in the EU, together with the result of the Chile-EU Free Trade Agreement, which lowered tariffs on Chilean in shell and shelled walnuts to zero in 2003, the EU now accounts for more than 70% of total exports, up 33% from 2000. Exports to the EU are expected to keep expanding.

As production continues to expand due to the increase in planted area, and improvements in orchards begin to bear fruit, total exports should expand further. Industry contacts forecast another increase in exports in CY2006, due to a projected increase in output.

Increasing amounts of mostly unshelled walnuts are being imported. Industry sources indicated that these correspond to walnuts that are sized and/or shelled and re-exported.

## Stocks

There are no trade or official statistics available on Chile's average stocks. However, exporters normally do not carry over stocks.

## Policy

There are no specific Government policies regulating or benefiting tree nut production in Chile. The general import duty on walnuts was permanently lowered to 6 percent in January 2003. The US-Chile Free Trade Agreement lowered duties on US in-shell and shelled walnuts to zero as of January 2004. Chilean exports to the US face a zero duty for in-shell walnuts, but pay 13.2 cents per Kg for shelled walnuts. This rate will be reduced to zero by 2007.

## Marketing

The number of walnut producers joining ChileNut keeps increasing. The recently formed producers association was created to improve quality and standardize production. Export promotion, mainly in developed countries, is another of Chile Nuts objectives. Members of the association contribute one cent per kilo of walnuts produced for training and marketing activities.

As indicated, ChileNut's first objective is to standardize and improve the quality of Chilean walnut production, with the goal of creating a quality category called "Chilean Nut". "Chilean Nut" is expected to embody a high international quality standard. Another objective of this organization is to train associated producers in "good agricultural practices", as most of Chile's export markets request high standards of quality. Finally, ChileNut expects to become an important service organization for walnut producers, generating needed market, price and

agricultural practices information that will be available through their web page. With this they hope to improve Chile's marketing position.

Another important activity of this organization is export promotion. For this, a project was presented to ProChile and approved, to co-finance promotional trips to Europe (Spain, Italy and Germany) and Asia (Japan, China and Taiwan) during CY2006. The total budget for these promotional trips, ProChile will provide 45 percent of the funding, is US\$450,000.

| PSD Table            |                           |                           |                           |                           |                           |                           |              |
|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------------|
| Country              | Chile                     |                           |                           |                           |                           |                           |              |
| Commodity            | Walnuts, Inshell Basis    |                           |                           |                           | (HA)(1000 TREES)(MT)      |                           |              |
|                      | 2004                      | Revised                   | 2005                      | Estimate                  | 2006                      | Forecast                  | UOM          |
|                      | USDA<br>Official<br>[Old] | Post<br>Estimate<br>[New] | USDA<br>Official<br>[Old] | Post<br>Estimate<br>[New] | USDA<br>Official<br>[Old] | Post<br>Estimate<br>[New] |              |
| Market Year Begin    |                           | 01/2005                   |                           | 01/2006                   |                           | 01/2007                   | MM/YYYY      |
| Area Planted         | 8255                      | 8255                      | 8500                      | 8500                      | 0                         | 9500                      | (HA)         |
| Area Harvested       | 5870                      | 5870                      | 5950                      | 5950                      | 0                         | 6100                      | (HA)         |
| Bearing Trees        | 669                       | 669                       | 678                       | 678                       | 0                         | 732                       | (1000 TREES) |
| Non-Bearing Trees    | 286                       | 286                       | 305                       | 305                       | 0                         | 408                       | (1000 TREES) |
| Total Trees          | 955                       | 955                       | 983                       | 983                       | 0                         | 1140                      | (1000 TREES) |
| Beginning Stocks     | 412                       | 721                       | 412                       | 300                       | 412                       | 200                       | (MT)         |
| Production           | 14200                     | 13900                     | 15500                     | 14500                     | 0                         | 16000                     | (MT)         |
| Imports              | 400                       | 460                       | 400                       | 400                       | 0                         | 400                       | (MT)         |
| TOTAL SUPPLY         | 15012                     | 15081                     | 16312                     | 15200                     | 412                       | 16600                     | (MT)         |
| Exports              | 12600                     | 12781                     | 13900                     | 13000                     | 0                         | 14300                     | (MT)         |
| Domestic Consumption | 2000                      | 2000                      | 2000                      | 2000                      | 0                         | 2000                      | (MT)         |
| Ending Stocks        | 412                       | 300                       | 412                       | 200                       | 0                         | 300                       | (MT)         |
| TOTAL DISTRIBUTION   | 15012                     | 15081                     | 16312                     | 15200                     | 0                         | 16600                     | (MT)         |

| Export Trade Matrix |                        |             |      |
|---------------------|------------------------|-------------|------|
| Country             | Chile                  |             |      |
| Commodity           | Almonds, Shelled Basis |             |      |
| Time Period         | Jan-Dec                | Units:      | M.T. |
| Exports for:        | 2004                   |             | 2005 |
| U.S.                | 0                      | U.S.        | 0    |
| Others              |                        | Others      |      |
| Argentina           | 871                    | Italy       | 769  |
| Spain               | 607                    | Brazil      | 677  |
| Brazil              | 528                    | Mexico      | 499  |
| Italia              | 449                    | Netherlands | 485  |
| India               | 222                    | Argentina   | 442  |
| Colombia            | 211                    | Spain       | 468  |
| Venezuela           | 134                    | Venezuela   | 428  |
| Mexico              | 107                    | France      | 423  |
| Netherlands         | 91                     | Germany     | 356  |
| Ecuador             | 54                     | U.K.        | 288  |
| Total for Others    | 3274                   |             | 4835 |
| Others not Listed   | 204                    |             | 1135 |
| Grand Total         | 3478                   |             | 5970 |

## Almonds

### Production

Excellent weather, together with a larger harvest area (the result of a moderate expansion in almond planted area during the last few years) resulted in a bumper crop in MY2005.

However for MY2006, production in most of the growing areas is forecast to decline significantly as a result of rain and frost during the flowering period (end of July, August of CY2005). Producers estimate production may fall by at least 40 percent compared to the previous year's output.

In the coming years total almond production will easily exceed 10,000 metric tons (shelled basis) as producers keep expanding their planted area in response to good economic returns compared to other crops. This forecast assumes normal weather conditions throughout the season. Industry sources indicate that currently close to 80 percent of Chile's planted area is in production.

### Crop Area

Although almond trees are planted from Region IV (La Serena) down to Region VIII (Chillan), over 80 percent of the total planted area is in the central regions, specifically Region VI (Rancagua) and the Metropolitan Region (Santiago). Almonds are planted on irrigated land and average yields are estimated to be between 600 Kg to slightly over one metric ton per hectare. Industry sources report that although many producers are increasing their plantings, total planted area in Chile is not expected to exceed 15,000 hectares, as almonds compete with avocados for the best production areas. Both crops have the same constraints: soil and weather (rainfall and frost). New avocado planting have exploded during the last few years as a result of excellent economic returns. Although Chile has no special advantages in almond production, industry sources indicate that in the next 5 to 7 years an estimated 500 hectares will be planted every year. Out of this total approximately 250 hectares will replace old aging orchards and 250 hectares will correspond to new-planted area.

### Inputs

Nonpareil is the main variety planted, accounting for 48 percent of the total planted area. Other important planted varieties are: Carmel, Solano and Price. All commercial almond orchards are planted on irrigated land. However, only an estimated 40 percent of the planted area has modern irrigation systems (drip irrigation).

### Trade

Most almonds exported are shelled and sent to markets where Chile has tariff preferences like Argentina, Brazil, Colombia, Venezuela and the European Union (Spain, Italy and the Netherlands). India is also an important market for in-shell almonds. Industry contacts are very optimistic about the benefit of a Chile-India free trade agreement for their sector. They expect duties to be significantly reduced from the current US\$0.80 per Kg for in-shell almonds and US\$2.30 per Kg for shelled almonds. As a result of strong export demand, due to a reported production shortage in California, export prices increased significantly in MY2005. Average export prices for Chilean almonds rose from US\$5.1 per Kg in MY2004 to US\$7.8 per Kg in MY 2005, a 53 percent increase.



Chile also imports almonds, mainly from the United States. Industry sources report that imports are mainly used by the confectionery industry and are a small size than produced in Chile.

### Policy

There are no specific Government policies regulating or benefiting almond production in Chile. The general import duty on almonds is 6 percent. However, the US-Chile Free Trade Agreement lowered duties on all US almonds to zero as of January 2004. Chilean almond exports to the US face a tariff of 12 cents per Kg for shelled almonds and 3.8 cents per Kg for in-shell almonds. However, all Chilean almonds will enter the United States duty free in 2007.

| PSD Table            |                           |                           |                           |                           |                           |                           |              |
|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------------|
| Country              | Chile                     |                           |                           |                           |                           |                           |              |
| Commodity            | Almonds, Shelled Basis    |                           |                           |                           | (HA)(1000 TREES)(MT)      |                           |              |
|                      | 2004                      | Revised                   | 2005                      | Estimate                  | 2006                      | Forecast                  | UOM          |
|                      | USDA<br>Official<br>[Old] | Post<br>Estimate<br>[New] | USDA<br>Official<br>[Old] | Post<br>Estimate<br>[New] | USDA<br>Official<br>[Old] | Post<br>Estimate<br>[New] |              |
| Market Year Begin    |                           | 01/2005                   |                           | 01/2006                   |                           | 01/2007                   | MM/YYYY      |
| Area Planted         | 6886                      | 6586                      | 7150                      | 7150                      | 0                         | 7600                      | (HA)         |
| Area Harvested       | 5460                      | 5280                      | 5860                      | 5860                      | 0                         | 6260                      | (HA)         |
| Bearing Trees        | 1747                      | 1690                      | 1875                      | 1875                      | 0                         | 2160                      | (1000 TREES) |
| Non-Bearing Trees    | 456                       | 418                       | 412                       | 412                       | 0                         | 462                       | (1000 TREES) |
| Total Trees          | 2203                      | 2108                      | 2287                      | 2287                      | 0                         | 2622                      | (1000 TREES) |
| Beginning Stocks     | 288                       | 233                       | 228                       | 425                       | 208                       | 275                       | (MT)         |
| Production           | 6000                      | 7500                      | 6200                      | 4500                      | 0                         | 6000                      | (MT)         |
| Imports              | 1100                      | 1162                      | 1150                      | 1150                      | 0                         | 1150                      | (MT)         |
| TOTAL SUPPLY         | 7388                      | 8895                      | 7578                      | 6075                      | 208                       | 7425                      | (MT)         |
| Exports              | 4710                      | 5970                      | 4900                      | 3400                      | 0                         | 4800                      | (MT)         |
| Domestic Consumption | 2450                      | 2500                      | 2470                      | 2400                      | 0                         | 2400                      | (MT)         |
| Ending Stocks        | 228                       | 425                       | 208                       | 275                       | 0                         | 225                       | (MT)         |
| TOTAL DISTRIBUTION   | 7388                      | 8895                      | 7578                      | 6075                      | 0                         | 7425                      | (MT)         |

| Export Trade Matrix |                        |             |      |
|---------------------|------------------------|-------------|------|
| Country             | Chile                  |             |      |
| Commodity           | Almonds, Shelled Basis |             |      |
| Time Period         | Jan-Dec                | Units:      | M.T. |
| Exports for:        | 2004                   |             | 2005 |
| U.S.                | 0                      | U.S.        | 0    |
| Others              |                        | Others      |      |
| Argentina           | 871                    | Italy       | 769  |
| Spain               | 607                    | Brazil      | 677  |
| Brazil              | 528                    | Mexico      | 499  |
| Italia              | 449                    | Netherlands | 485  |
| India               | 222                    | Argentina   | 442  |
| Colombia            | 211                    | Spain       | 468  |
| Venezuela           | 134                    | Venezuela   | 428  |
| Mexico              | 107                    | France      | 423  |
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| Total for Others    | 3274                   |             | 4835 |
| Others not Listed   | 204                    |             | 1135 |
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